

Denmark

Danish Geodata Agency

Bridging the map gap: Visualising coastal hazards in Greenland's nearshore waters

“Official geospatial data is a sovereign asset—trusted because it is governed and developed in partnership with those who rely on it. Through close cooperation with Greenlandic authorities and local partners, the Danish Geodata Agency showed a method to deliver reliable coastal information for Greenlandic waters, supporting safer planning and operations where traditional surveys are limited.”

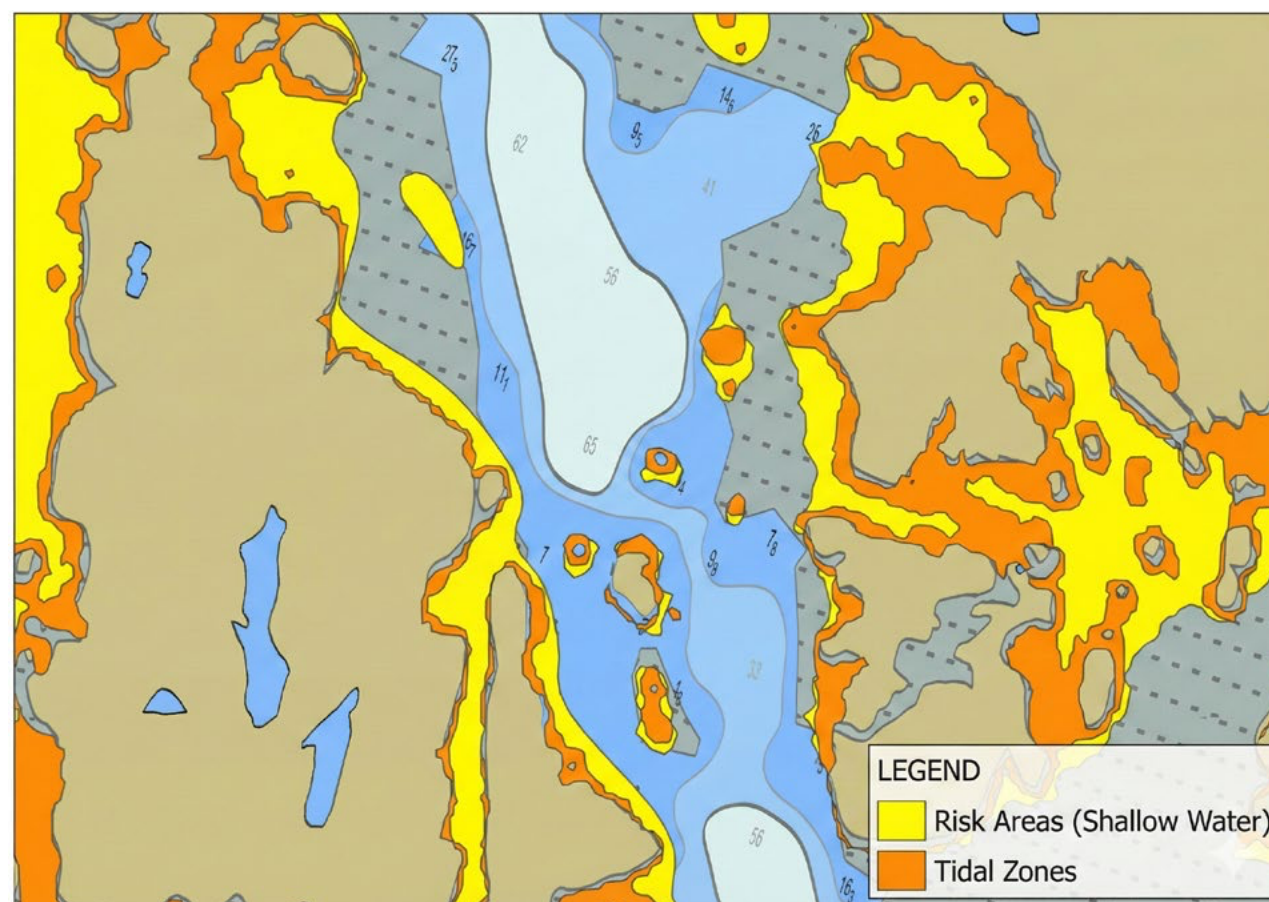
Pia Dahl Højgaard
Director General,
Danish Geodata Agency

Mariners now have a better picture of nearshore hazards thanks to a collaboration between the Danish Geodata Agency and Greenlandic partners. The project fills critical information gaps to provide a more complete basis for planning and operations in previously data-sparse areas.

The pilot project produced and published official, open satellite-derived coastal data to improve authoritative situational awareness of nearshore hazards where conventional charting coverage is sparse.

The Danish Geodata Agency partnered closely with Greenlandic authorities and local stakeholders to align priorities, validate usability and ensure local anchoring of outputs. A production-oriented ‘learning-by-doing’ approach combines external specialist support (software and training) with internal governance, documentation and quality review within the national hydrographic authority.

Repeatable workflows were established for processing, classification, verification, and export of coastal products suitable for public dissemination. The outputs were released as open data through official channels, preserving provenance and accountability while enabling broad reuse.



Bridging the gap in Arctic maritime safety. This map panel demonstrates the added value of satellite-derived data (SDB) compared to existing official charts. While traditional hydrographic charts (blue areas) are limited in nearshore waters, the new **Shallow-Water Risk Areas** (yellow) and **Tidal Zones** (orange) extend significantly further toward the coastline.

Benefits

- Strengthened trusted data for Europe's Arctic region through joint ownership and local anchoring with Greenlandic authorities and partners.
- Delivered open government data enabling reuse without access barriers by Greenlandic and European authorities, industry and research.
- Improved maritime risk awareness by identifying shallow-risk zones and hazard features in poorly surveyed nearshore areas.
- Supported SAR and emergency preparedness through better authoritative situational awareness in data-sparse coastal waters.
- Increased data sovereignty and resilience, reducing reliance on ad hoc or non-authoritative sources.
- Enabled better prioritisation of future conventional surveys by highlighting high-risk areas with greatest safety impact.
- Built institutional capability (processes, documentation, competence) for sustained official production using satellite methods.
- Provided a replicable governance model for integrating novel technology into the official domain in partnership with local authorities.